

This amendment is deemed appropriate insofar as no claims in the present application are directed to a method, the previous title of the present application.

All the claims submitted for examination in this application have been rejected on substantive grounds. Applicants have amended their claims and respectfully submit that the amended claims of the present application are patentable over the substantive rejection of record.

The amended claims of the present application are directed to a system for the treatment of silicone emulsion waste limited to the components recited therein. That is, the efficient system of the present application is restricted, in independent Claim 20, to five components. The teaching of the principal applied reference, U.S. Patent 4,961,858 to Spei et al., is more complicated, requiring additional instrumentation and components to produce a result which is not specifically designed for the application to which the claimed system of the present application is limited.

The system employed in Spei et al. requires a metering device which controls the introduction of organic demulsifier into at least one separation vessel. It is apparent that a metering device controlling the addition of an organic demulsifier is critical to the proper operation of Spei et al. apparatus. The claims of the present application, however, are restricted to components recited in Claim 20, which recited components do not include a metering device.

Another requirement of the system disclosed in Spei et al. is the inclusion of at least one mixing tank for the mixing of the organic demulsifier and the waste emulsion. These mixing tanks are denoted as separation vessels in Figures 1 and 2 of the Spei et al. patent. Unlike the claimed system of the present application the oil and water phases are

separated in a separate vessel, denoted in the Spei et al. drawings as "Oil Phase/Oil Separator Water Phase. In the claimed system of the present application the mixing tank operates as both a mixing vessel and a phase separation vessel.

It is noted in passing that although the secondary reference is applied in the rejection of independent Claim 20 for its teaching of a water tank, U.S. Patent 5,149,440 to Moller includes the requirement of separate mixing and phase separation vessels. As such, the defect indicated above in Spei et al. is not cured by the application of the secondary Moller reference.

The Official Action indeed admits that there is no disclosure in Spei et al. setting forth or making obvious the inclusion of a water tank, in communication with the claimed mixing tank, for the disposition of the separated emulsion-free water phase. As stated above, Moller is applied for the inclusion of such a water storage tank, denoted therein at 40.

Applicants submit that even if it would be appropriate to combine the teachings of the principal Spei et al. and the secondary Moller references, which applicants submit is not the case, reiterating as they do the arguments made in the Remarks section of their earlier Amendment, that these two references are improperly combined, still the combined teaching of the applied Spei et al. and Moller references do not disclose a system requiring the components recited therein. It is again emphasized that amended Claim 20 is limited to the components recited in that claim.

The same two Spei et al. and Moller references are applied in the rejection of Claim 22, as being unpatentable under 35 U.S.C. §103(a). The predicate for this ground of

water tank 40.

Claim 22 depends from Claim 20 and thus incorporates all the limitation thereof. Insofar as Claim 20 is patentable over the combined teaching of Spei et al. and Moller for the reasons given in the discussion of the patentability of that claim, supra, it is apparent that the further limitation of Claim 22 only emphasizes the patentability of that claim.

It is moreover emphasized that the further limitation of Claim 22 is not made obvious by the combined teaching of Spei et al. and Moller. Claim 22 has been amended, in accordance with the amendment to Claim 20, to emphasize that the system of that claim is limited to the components recited in Claim 22. Claim 22 adds a wastewater treatment plant to the silicone emulsion waste system of Claim 20. The wastewater treatment plant, as indicated in Claim 22, is in communication with the water tank.

It is apparent that Spei et al. neither discloses nor suggests such an arrangement insofar as the Official Action admits that there is not even a water tank involved in the Spei et al. system. The disclosure in Moller is just as deficient insofar as no wastewater plant is disclosed or suggested therein. Indeed, no attempt is made in the outstanding Official Action to argue that Moller teaches such a wastewater plant. The Official Action, instead, argues that a wastewater plant is made obvious by Spei et al. Specifically, the Official Action states that Spei et al. discloses the further treatment of the demulsified water or aqueous phase.

The sole predicate for this suggestion is the disclosure in Figures 1 and 2 of Spei et al. wherein the demulsified aqueous phase is shown as an arrow which is denoted

"DEMULSIFIED AQUEOUS PHASE / TO AFTERTREATMENT /UF / COALESCENCE / ADSORPTION / HYDROXIDE DEMULS / SEPARATOR. To suggest that these figures makes obvious a wastewater plant is nothing more than a hindsight appreciation and appropriation of applicants' invention. There is nothing in the disclosure in Moller that teaches the elegant system of the present application which includes, in Claim 22, a wastewater plant.

The outstanding Official Action admits that dependent Claim 21 is patentable, under 35 U.S.C. §103(a), over the combined teaching of Spei et al. in view of Moller. Thus, a tertiary reference, U.S. Patent 6,207,065 to Brown, is applied in combination with the combined teaching of Spei et al. and Moller.

At the outset, it is emphasized that Claim 21 depends from Claim 20 and is thus patentable on the basis of the patentability of Claim 20 for the reasons given above. However, applicants emphasize that the further limitation of Claim 21, the requirement that the system additionally consists essentially of an incinerator for the treatment of the silicone oil laden liquid, further establishes the patentable nature of that claim.

Before addressing that matter, applicants note that Claim 21 has been amended to conform to the amended language of Claim 20. That amended claim requires that an incinerator be in communication with the oil tank in which the separated silicone oil-laden liquid phase is disposed.

It is true that Brown teaches that liquid waste generated aboard a maritime vessel may be separated into oily and non-oily components for separate treatment. Applicants aver, however, that the teaching of Brown is totally unrelated to the system of the present application, as well as the systems taught in the principal and secondary Spei et al. and Moller

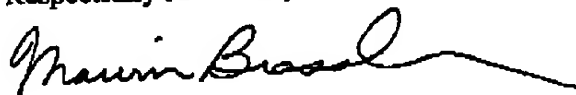
references. The teaching of the system of the present application, as well as the principal and secondary references, is directed to treating emulsions, albeit the claims of the present application focus on silicone emulsion wastes, not specifically mentioned in the principal and secondary references. The teaching of Brown is directed to separation of waste that is generated on maritime vessels for separate disposal. Obviously, waste oil cannot be allowed to pollute the waters in which the maritime vessel traverses. As such, incineration represents the only logical disposal means for that waste. However, disposition of emulsion-free water, separated from a silicone emulsion waste stream, is open to many options. There is nothing in the emulsion separation arts, as exemplified by Spei et al. and Moller, that suggests this option of incineration. For example, one skilled in the emulsion separation arts would never look to a reference of the type disclosed in Brown to identify a suitable disposition of emulsion-free water. Therefore, as stated in applicants' earlier response, there is no motivation to combine the teaching of Brown with the principal and secondary references. Thus, the use of this reference cannot be properly combined with those references to make obvious the limitation of Claim 22.

The above remarks establish the patentable nature of the amended claims of this application over the substantive grounds of rejection imposed in the outstanding Official Action. Therefore, introduction of the amendment to the claims, which raises no new issues but better places those claims in condition for allowance, followed by rescindal of the outstanding grounds of rejection is deemed appropriate. Such action is respectfully urged.

The above amendment and remarks establish the patentable nature of all the claims currently in this application. Notice of Allowance and passage to issue of these claims,

Claims 20-22, is therefore respectfully solicited.

Respectfully submitted,



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APPENDIX**RENDITION OF APPLICATION AMENDMENT SHOWING CHANGES MADE****IN THE TITLE:**

(Amended) SYSTEM [METHOD] FOR TREATMENT OF SILICONE EMULSION WASTE [BY CHEMICAL ADDITION]

IN THE CLAIMS:

Claim 20 (Amended): A system for the treatment of silicon emulsion waste consisting essentially of [comprising]:

a silicone emulsion waste reservoir;

at least one chemical tank containing chemicals for separating the silicone emulsion waste;

at least one mixing tank in communication with the silicone emulsion waste reservoir and the at least one chemical tank, wherein the silicone emulsion waste and chemicals are mixed in the mixing tank and the silicone emulsion waste is separated into a silicone oil laden liquid and [an] emulsion-free water;

a water tank that receives the emulsion-free water from the mixing tank; and

an oil tank which receives the silicone oil laden liquid from the mixing tank.

Claim 21 (Amended): The system of claim 20, which additionally consists essentially of [wherein the oil tank is in communication with] an incinerator, for treatment of the silicone oil laden liquid, the incinerator being in communication with the oil tank.

Claim 22 (Amended): The system of claim 20, which additionally consists essentially of [wherein the water tank is in communication with] a wastewater treatment plant, for

treating the emulsion-free water, the wastewater treatment plant being in communication with the water tank.